

## NEW

# Tag-ChIP-IT<sup>®</sup> Enables ChIP Without Protein-specific Antibodies

Interested in studying transcription factor sequence variants, mutations or truncations? Can't find a suitable antibody for ChIP? Don't limit your ChIP experiments based on antibody availability. Active Motif's new Tag-ChIP-IT system enables you to create a fusion protein expressing Active Motif's unique AM-tag sequence that was specifically designed to work in ChIP. Simply clone your protein of interest in-frame with the C-terminal AM-tag. Transient or stable transfections of the fusion protein can be analyzed by ChIP with an antibody directed against the AM-tag.

## No ChIP-validated antibody for your protein of interest? No problem!

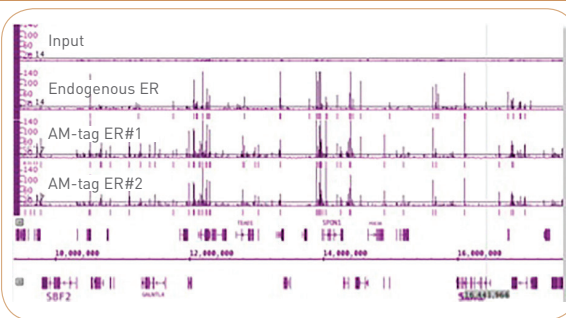
Transcription factor ChIP is often challenging due to a lack of available antibodies that are capable of recognizing target-bound protein of interest post-fixation, or the inability of available antibodies to distinguish between protein isoforms. These limitations make it difficult to study the effects of sequence variants, mutations and truncations on gene regulation.

To overcome these challenges, Active Motif has developed the **Tag-ChIP-IT Kit** to enable ChIP without the use of a target-specific antibody. Tag-ChIP-IT utilizes a unique AM-tag specifically designed to minimize cross-reactivity with mammalian samples for reduced background signal. Additionally, the design maximizes exposure of the AM-tag during the immunoprecipitation reaction to increase the enrichment efficiency of low abundance transcription factors for more reliable and consistent ChIP results (Figure 1).

### Tag-ChIP-IT advantages

- Ideal for targets lacking ChIP Abs
- Distinguish between protein isoforms and mutants
- High specificity due to low cross-reactivity of AM-tag with mammalian samples

### Tag-ChIP-IT is Used to Identify Estrogen Receptor (ER) Binding Motifs



**Figure 1:** ER cDNA was cloned into pAM\_1C Empty Vector and transiently transfected into cells. Cells were induced with estradiol and chromatin was harvested and Tag-ChIP performed using the Tag-ChIP-IT Kit. Following cross-link reversal, enriched DNA was submitted for Next-Generation Sequencing. Data was compared to published ChIP-Seq results using an anti-ER antibody in the same cell line and induction conditions. ChIP-Seq data shows the same ER peak profile with the AM-tag ChIP as endogenous ER. Detected binding sites were further evaluated for binding motifs and results show that the ER motif was identified in both Tag-ChIP-IT samples.

### How does it work?

Use the **pAM\_1C Empty Vector** to clone your protein of interest in-frame with the C-terminal AM-tag. Alternatively, the AM-tag sequence can be cloned into your expression vector of choice. Following transfection and expression of your tagged protein, the **Tag-ChIP-IT Kit** can be used to isolate chromatin and perform immunoprecipitations using **AM-Tag antibody** specific for the AM-tag.

### What's in the box?

The Tag-ChIP-IT Kit contains the same optimized reagents as our ChIP-IT<sup>®</sup> High Sensitivity Kit to enable specific detection of low abundance proteins. The kit includes buffers, protease inhibitors, Protein G agarose beads, DNA purification columns and the AM-Tag antibody. For cloning, the pAM\_1C Empty Vector is available separately. For more information, visit [www.activemotif.com/tagchip](http://www.activemotif.com/tagchip).

Product	Format	Catalog No.
Tag-ChIP-IT <sup>®</sup> Kit	16 rxns	53022
pAM_1C Empty Vector	20 µg	53023
pAM_1C_JunD Vector	50 µg	53044
AM-Tag antibody	100 µg	61677
FuGENE <sup>®</sup> HD Transfection Reagent	0.2 ml	32042